

## LISTING OF THE CLAIMS

The following listing, if entered, replaces all prior versions of the claims in the present application.

1. **(Currently Amended)** A method for communicating comprising:  
controlling a user interface presented by a web browser comprising:  
causing a web server to push an asynchronous message to the web browser  
in response to an incoming event, wherein  
the incoming event **comprises a request to establish  
communication with a user; is an event other than a  
request for information from the web server;**  
the web browser presents a user interface change in response to the  
asynchronous message, and  
the incoming event is received by a communication server;  
causing the web browser to provide a wait request to the web server  
wherein, the wait request is associated with the web browser, and  
the wait request **taken alone, enables the web server to push the  
asynchronous message to the web browser; is other than a  
request for information from the web server;**  
identifying a source of the asynchronous message; and  
associating the wait request with the source, wherein the associating  
identifies the web browser as a recipient of the asynchronous  
message.
2. (Original) The method of claim 1 further comprising:  
generating the asynchronous message.
3. (Original) The method of claim 1 further comprising:  
preparing to receive the asynchronous message.
- 4-5. (Cancelled)

6. (Previously Presented) The method of claim 1 further comprising:  
generating the asynchronous message, the asynchronous message identifying the  
wait request, wherein the identifying identifies the web browser as a  
recipient of the asynchronous message; and  
providing the asynchronous message to the web server.
7. (Original) The method of claim 6 wherein causing the web browser to provide the  
wait request comprises:  
downloading requesting instructions to the web browser, wherein  
the downloading causes the web browser to execute the requesting  
instructions.
8. (Original) The method of claim 6 further comprising:  
storing a reference to a callback function with information from the wait request;  
and  
using the reference to call the callback function when the asynchronous message  
is provided to the web server, wherein the callback function pushes the  
asynchronous message.
9. (Original) The method of claim 8 further comprising:  
providing the callback function with context information, the context  
information identifying the web browser.
10. (Original) The method of claim 6 further comprising:  
assigning the wait request to a connection between the web server and a business  
process server; and  
listening to the connection for the asynchronous message.
11. (Original) The method of claim 6 further comprising:  
assigning the wait request to a session between the web server and a business  
process server, the session being associated with a connection; and  
listening to the connection for the asynchronous message for the session.

12. (Original) The method of claim 1 wherein causing the web server to push the asynchronous message comprises:
- calling a callback function associated with the web browser when the asynchronous message is received, wherein the callback function pushes the asynchronous message.
13. (Original) The method of claim 12 further comprising:
- storing a reference to the callback function; and
  - using the reference for calling the callback function.
14. (Original) The method of claim 13 further comprising:
- storing a second reference to context information, the context information identifying the web browser; and
  - using the second reference for providing the context information to the callback function.
15. (Previously Presented) The method of claim 1 wherein the change in the user interface comprises at least one of a group consisting of the following:
- causing a first user interface object to move to visually capture a user's attention;
  - causing a second user interface object to issue a sound to capture the user's attention;
  - presenting a screen pop of data; and
  - bringing a web browser window to the front of a screen.
16. (Currently Amended) A method for communicating comprising:
- causing a web server to push an asynchronous message to a web browser in response to an incoming event, wherein
    - the incoming event comprises a request to establish communication with a user; is an event other than a request for information from the web server,
  - the web browser performs an action in response to the

asynchronous message, and  
the incoming event is received by a communication server;  
causing the web browser to provide a wait request to the web server wherein, the  
wait request is associated with the web browser, and the wait request  
taken alone, enables the web server to push the asynchronous message  
to the web browser;~~is other than a request for information from the~~  
~~web server;~~  
identifying a source of the asynchronous message; and  
associating the wait request with the source, wherein the associating identifies the  
web browser as a recipient of the asynchronous message.

17. (Original) The method of claim 16 wherein  
the asynchronous message includes an action instruction to cause the web browser  
to perform the action.
18. (Original) The method of claim 16 wherein the performing the action comprises  
performing at least one of a group consisting of the following:  
causing a first user interface object to move to visually capture a user's attention;  
causing a second user interface object to issue a sound to capture the user's  
attention;  
presenting a screen pop of data; and  
bringing a web browser window to front of screen.
19. **(Currently Amended)** A method for communicating comprising:  
establishing a first connection between a web browser and a web server;  
establishing a second connection between the web server and a business process  
server;  
controlling a user interface presented by the web browser comprising:  
registering the web browser with the business process server;  
providing the web server with an asynchronous message to push to the  
web browser, the providing being performed by the business  
process server and the providing being performed in response to an

incoming event, wherein the incoming event **comprises a request to establish communication with a user; is an event other than a request for information from the web server,**

and

causing the web server to push the asynchronous message to the web browser;

wherein the web browser performs a user interface change in response to the asynchronous message;

the incoming event is received by a communication server;

causing the web browser to provide a wait request to the web server wherein, the wait request is associated with the web browser, and the wait request **taken alone, enables the web server to push the asynchronous message to the web browser; is other than a request for information from the web server;**

identifying a source of the asynchronous message; and

associating the wait request with the source, wherein the associating identifies the web browser as a recipient of the asynchronous message.

20. **(Currently Amended)** A method for communicating comprising:
- controlling a user interface presented by a web browser comprising:
- registering the web browser as available to receive an asynchronous message, wherein
- the web browser is not blocked waiting for the asynchronous message;
- causing a web server to push the asynchronous message to the web browser in response to an incoming event, wherein
- the incoming event **comprises a request to establish communication with a user; is an event other than a request for information from the web server,**
- the web browser presents a user interface change in response to the asynchronous message, and
- the incoming event is received by a communication server;

causing the web browser to provide a wait request to the web server  
 wherein, the wait request is associated with the web browser, and  
 the wait request taken alone, enables the web server to push the  
 asynchronous message to the web browser; is other than a  
 request for information from the web server;  
 identifying a source of the asynchronous message; and  
 associating the wait request with the source, wherein the associating  
 identifies the web browser as a recipient of the asynchronous  
 message.

21. **(Currently Amended)** A method for communicating comprising:  
 controlling a user interface presented by a web browser comprising:  
 causing the web browser to provide a wait request to a web server, the  
 wait request being associated with the web browser, and the wait  
 request taken alone, enables the web server to push the  
 asynchronous message to the web browser; is other than a  
 request for information from the web server;  
 identifying a source of an asynchronous message;  
 associating the wait request with the source, wherein the associating  
 identifies the web browser as a recipient of the asynchronous  
 message;  
 pushing the asynchronous message to the web browser in response to an  
 incoming event, wherein  
 the incoming event comprises a request to establish  
 communication with a user; is an event other than a  
 request for information from the web server;  
 the browser presents a user interface change in response to the  
 asynchronous message, and  
 the incoming event is received by a communication server;  
 identifying a source of the asynchronous message; and  
 associating the wait request with the source, wherein the associating  
 identifies the web browser as a recipient of the asynchronous

message.

22. **(Currently Amended)** A method for communicating comprising:  
controlling a user interface presented by a web browser comprising:  
causing the web browser to provide a wait request to a web server,  
wherein  
the wait request is associated with the web browser and a target  
from which an asynchronous message originates, and  
the wait request taken alone, enables the web server to push the  
asynchronous message to the web browser;~~is other than  
a request for information from the web server;~~  
generating the asynchronous message, the asynchronous message  
identifying the web browser as a recipient of the asynchronous  
message, the generating being performed by the target;  
providing the asynchronous message to the web server; and  
causing the web server to push the asynchronous message to the web  
browser in response to an incoming event, wherein  
the incoming event comprises a request to establish  
communication with a user;~~is an event other than a  
request for information from the web server,~~  
the web browser presents a user interface change in response to the  
asynchronous message; and  
the incoming event is received by a communication server.
23. **(Currently Amended)** A computer program product comprising:  
controlling instructions to control a user interface presented by a web browser  
comprising:  
pushing instructions to cause a web server to push an asynchronous  
message to the web browser in response to an incoming event,  
wherein  
the incoming event comprises a request to establish  
communication with a user;~~is an event other than a~~

~~request for information from the web server,~~  
the web browser presents a user interface change in response to the  
asynchronous message, and  
the incoming event is received by a communication server;  
providing instructions to cause the web browser to provide a wait request to the  
web server, the wait request being associated with the web browser and  
the wait request taken alone, enables the web server to push the  
asynchronous message to the web browser; is other than a request for  
~~information from the web server;~~;  
identifying instructions to identify a source of the asynchronous message; and  
associating instructions to associate the wait request with the source, wherein the  
associating identifies the web browser as a recipient of the asynchronous  
message; and  
a computer-readable medium for storing the controlling instructions, the pushing  
instructions, the providing instructions, the identifying instructions, and  
the associating instructions.

24. (Cancelled)
25. (Original) The computer program product of claim 23 further comprising:  
request providing instructions to cause the web browser to provide a wait request  
to the web server, the wait request being associated with the web browser;  
generating instructions to generate the asynchronous message, the asynchronous  
message identifying the wait request, wherein the identifying identifies the  
web browser as a recipient of the asynchronous message; and  
message providing instructions to provide the asynchronous message to the web  
server;  
wherein the computer-readable medium further stores the request providing  
instructions, the generating instructions, and the message providing  
instructions.
26. (Original) The computer program product of claim 25 further comprising:



- storing instructions to store a reference to a callback function with information from the wait request; and
- using instructions to use the reference to call the callback function when the asynchronous message is provided to the web server, wherein the callback function pushes the asynchronous message;
- wherein the computer-readable medium further stores the storing instructions and the using instructions.
27. (Original) The computer program product of claim 26 further comprising: context providing instructions to provide the callback function with context information, the context information identifying the web browser; wherein the computer-readable medium further stores the context providing instructions.
28. (Original) The computer program product of claim 25 further comprising: assigning instructions to assign the wait request to a connection between the web server and a business process server; and listening instructions to listen to the connection for the asynchronous message; wherein the computer-readable medium further stores the assigning instructions and the listening instructions.
29. (Original) The computer program product of claim 23 wherein the pushing instructions comprise:
- calling instructions to call a callback function associated with the web browser when the asynchronous message is received, wherein the callback function pushes the asynchronous message;
- and
- the computer-readable medium further stores the calling instructions.
30. (Original) The computer program product of claim 29 further comprising: reference storing instructions to store a reference to the callback function; and reference using instructions to use the reference for calling the callback function; wherein the computer-readable medium further stores the reference storing

instructions and the reference using instructions.

31. (Original) The computer program product of claim 30 further comprising:  
context storing instructions to store a second reference to context information, the  
context information identifying the web browser; and  
context using instructions to use the second reference for providing the context  
information to the callback function;  
wherein the computer-readable medium further stores the context storing  
instructions and the context using instructions.
32. (Previously Presented) The computer program product of claim 23 further  
comprising:  
user interface changing instructions configured to perform at least one of a group  
consisting of the following:  
cause a first user interface object to move to visually capture a user's  
attention;  
cause a second user interface object to issue a sound to capture the user's  
attention;  
present a screen pop of data; and  
bring a web browser window to the front of a screen;  
wherein the computer-readable medium further stores the user interface changing  
instructions.
33. (Currently Amended) A computer program product comprising:  
controlling instructions to control a user interface presented by a web browser  
comprising:  
registering instructions to register the web browser as available to receive  
an asynchronous message, wherein  
the web browser is not blocked waiting for the asynchronous  
message;  
and  
pushing instructions to cause a web server to push the asynchronous

message to the web browser in response to an incoming event,  
wherein

the incoming event comprises a request to establish  
communication with a user; is an event other  
than a request for information from the web  
server;

the web browser presents a user interface change in  
response to the asynchronous message, and

the incoming event is received by a communication server;

providing instructions to cause the web browser to provide a wait request to the  
web server wherein, the wait request is associated with the web browser,  
and the wait request taken alone, enables the web server to push the  
asynchronous message to the web browser; is other than a request for  
information from the web server;

identifying instructions to identify a source of the asynchronous message; and  
associating instructions to associate the wait request with the source, wherein the  
associating identifies the web browser as a recipient of the asynchronous  
message; and

a computer-readable medium for storing the controlling instructions, the  
registering instructions, the pushing instructions, the providing  
instructions, the identifying instructions, and the associating instructions.

34. **(Currently Amended)** A computer system comprising:

a processor;

a memory, the memory storing instructions for executing on the processor, the  
instructions comprising:

controlling instructions to control a user interface presented by a web  
browser comprising:

pushing instructions to cause a web server to push an asynchronous  
message to the web browser in response to an incoming  
event, wherein

the incoming event comprises a request to establish

**communication with a user,**

the web browser presents a user interface change in response to the asynchronous message, and the incoming event is received by a communication server; providing instructions to cause the web browser to provide a wait request to the web server, the wait request being associated with the web browser, **and the wait request taken alone, enables the web server to push the asynchronous message to the web browser;** ~~is other than a request for information from the web server;~~ identifying instructions to identify a source of the asynchronous message; and associating instructions to associate the wait request with the source, wherein the associating identifies the web browser as a recipient of the asynchronous message.

35. (Cancelled)

36. (Original) The computer system of claim 34 wherein the instructions further comprise:

request providing instructions to cause the web browser to provide a wait request to the web server, the wait request being associated with the web browser; generating instructions to generate the asynchronous message, the asynchronous message identifying the wait request, wherein the identifying identifies the web browser as a recipient of the asynchronous message; and message providing instructions to provide the asynchronous message to the web server.

37. (Original) The computer system of claim 36 wherein the instructions further comprise:

storing instructions to store a reference to a callback function with information from the wait request; and

using instructions to use the reference to call the callback function when the asynchronous message is provided to the web server, wherein the callback function pushes the asynchronous message.

38. (Original) The computer system of claim 37 wherein the instructions further comprise:

context providing instructions to provide the callback function with context information, the context information identifying the web browser.

39. (Original) The computer system of claim 36 wherein the instructions further comprise:

assigning instructions to assign the wait request to a connection between the web server and a business process server; and  
listening instructions to listen to the connection for the asynchronous message.

40. (Original) The computer system of claim 34 wherein the pushing instructions comprise:

calling instructions to call a callback function associated with the web browser when the asynchronous message is received, wherein the callback function pushes the asynchronous message.

41. (Original) The computer system of claim 40 wherein the instructions further comprise:

reference storing instructions to store a reference to the callback function; and  
reference using instructions to use the reference for calling the callback function.

42. (Original) The computer system of claim 41 wherein the instructions further comprise:

context storing instructions to store a second reference to context information, the context information identifying the web browser; and  
context using instructions to use the second reference for providing the context information to the callback function.

43. (Previously Presented) The computer system of claim 34 wherein the instructions

further comprise:

user interface changing instructions configured to perform at least one of a group consisting of the following:  
 cause a first user interface object to move to visually capture a user's attention;  
 cause a second user interface object to issue a sound to capture the user's attention;  
 present a screen pop of data; and  
 bring a web browser window to the front of a screen.

44. **(Currently Amended)** A computer system comprising:  
 a processor;  
 a memory, the memory storing instructions for executing on the processor, the instructions comprising:  
 controlling instructions to control a user interface presented by a web browser comprising:  
 registering instructions to register the web browser as available to receive an asynchronous message, wherein the web browser is not blocked waiting for the asynchronous message;  
 pushing instructions to cause a web server to push the asynchronous message to the web browser in response to an incoming event, wherein the incoming event comprises a request to establish communication with a user; is an event other than a request for information from the web server,  
 the web browser presents a user interface change in response to the asynchronous message, and  
 the incoming event is received by a communication server.  
 providing instructions to cause the web browser to provide a wait request to the web server wherein, the wait request is associated with the web browser, and the wait request taken alone, enables the web

**server to push the asynchronous message to the web browser;**  
**is other than a request for information from the web server;**  
 identifying instructions to identify a source of the asynchronous message;  
 and  
 associating instructions to associate the wait request with the source,  
 wherein the associating identifies the web browser as a recipient of  
 the asynchronous message.

45. **(Currently Amended)** A system comprising:  
 a client computer comprising:  
     a web browser, wherein the web browser presents a user interface;  
 a server computer coupled to the client computer, wherein the server computer  
     comprises  
         controlling means for controlling the user interface presented by  
             the web browser,  
         pushing means for causing a web server to push an asynchronous  
             message to the web browser in response to an incoming  
             event, wherein  
             the incoming event **comprises a request to establish**  
                 **communication with a user; is an event other**  
                 **than a request for information from the web**  
                 **server;**  
         the web browser presents a user interface change in  
             response to the asynchronous message, and  
         the incoming event is received by a communication server,  
     identifying means for identifying a source of the asynchronous message,  
     and  
     associating means for associating a wait request with the source, wherein  
         the associating identifies the web browser as a recipient of the  
         asynchronous message, and  
 the client computer comprises  
     providing means for causing the web browser to provide the wait

request to the web server,  
the wait request is associated with the web browser, and  
the wait request taken alone, enables the web server to push the asynchronous message to the web browser. is other than  
~~a request for information from the web server~~

46. (Cancelled)

47. (Previously Presented) The system of claim 45, the server computer further comprising:

generating means for generating the asynchronous message, the asynchronous message identifying the wait request, wherein the identifying identifies the web browser as a recipient of the asynchronous message; and  
message providing means for providing the asynchronous message to the web server.

48. (Previously Presented) The system of claim 47, the server computer further comprising:

storing means for storing a reference to a callback function with information from the wait request; and  
using means for using the reference to call the callback function when the asynchronous message is provided to the web server, wherein the callback function pushes the asynchronous message.

49. (Previously Presented) The system of claim 48, the client computer further comprising:

context providing means for providing the callback function with context information, the context information identifying the web browser.

50. (Previously Presented) The system of claim 47, the server computer further comprising:

assigning means for assigning the wait request to a connection between the web server and a business process server; and



listening means for listening to the connection for the asynchronous message.

51. (Original) The system of claim 45 wherein the pushing means comprise:  
calling means for calling a callback function associated with the web browser  
when the asynchronous message is received, wherein the callback function  
pushes the asynchronous message.
52. (Previously Presented) The system of claim 51, the server computer further  
comprising:  
reference storing means for storing a reference to the callback function; and  
reference using means for using the reference for calling the callback function.
53. (Previously Presented) The system of claim 52, the server computer further  
comprising:  
context storing means for storing a second reference to context information, the  
context information identifying the web browser; and  
context using means for using the second reference for providing the context  
information to the callback function.
54. (Previously Presented) The system of claim 45, the client computer further  
comprising:  
user interface changing means configured to perform at least one of a group  
consisting of the following:  
cause a first user interface object to move to visually capture a user's  
attention;  
cause a second user interface object to issue a sound to capture the user's  
attention;  
present a screen pop of data; and  
bring a web browser window to front of screen.
55. (Currently Amended) A system comprising:  
a client computer comprising:  
a web browser, wherein the web browser presents a user interface;

a server computer coupled to the client computer, wherein the server computer comprises

controlling means for controlling a user interface presented by a web browser,

registering means for registering the web browser as available to receive an asynchronous message, wherein the web browser is not blocked waiting for the asynchronous message, and

pushing means for causing a web server to push the asynchronous message to the web browser in response to an incoming event, wherein the incoming event comprises a request to establish communication with a user; is an event other than a request for information from the web server,

the web browser presents a user interface change in response to the asynchronous message, and

the incoming event is received by a communication server,

identifying means for identifying a source of the asynchronous message,

associating means for associating a wait request with the source, wherein the associating identifies the web browser as a recipient of the asynchronous message, and

the client computer comprises

providing means for causing the web browser to provide the wait request to the web server,

the wait request is associated with the web browser, and

the wait request taken alone, enables the web server to push the asynchronous message to the web browser, is other than a request for information from the web server

56. (Cancelled)

57. (Cancelled)

58. **(Currently Amended)** A system comprising:  
 a controlling module to control a user interface presented by a web browser comprising:  
 a pushing module to cause a web server to push an asynchronous message to the web browser in response to an incoming event, wherein the incoming event comprises a request to establish communication with a user; is an event other than a request for information from the web server;  
 the web browser presents a user interface change in response to the asynchronous message, and  
 the incoming event is received by a communication server;  
 a request providing module to cause the web browser to provide a wait request to the web server wherein, the wait request is associated with the web browser, and the wait request taken alone, enables the web server to push the asynchronous message to the web browser; is other than a request for information from the web server;  
 an identifying module to identify a source of the asynchronous message; an associating module to associate the wait request with the source, wherein the associating identifies the web browser as a recipient of the asynchronous message; and  
 a computer readable storage medium configured to store the controlling module, pushing module, request providing module, identifying module, and associating module.
59. **(Cancelled)**
60. **(Previously Presented)** The system of claim 58 further comprising:  
 a generating module to generate the asynchronous message, the asynchronous message identifying the wait request, wherein the identifying identifies the web browser as a recipient of the asynchronous message; and  
 a message providing module to provide the asynchronous message to the web server, wherein

the computer readable storage medium is configured to store the generating module and message providing module.

61. (Previously Presented) The system of claim 60 further comprising:  
a storing module to store a reference to a callback function with information from the wait request; and  
a using module to use the reference to call the callback function when the asynchronous message is provided to the web server, wherein the callback function pushes the asynchronous message, wherein  
the computer readable storage medium is configured to store the storing module and using module.
62. (Previously Presented) The system of claim 61 further comprising:  
a context providing module to provide the callback function with context information, the context information identifying the web browser, wherein  
the computer readable storage medium is configured to store the context providing module.
63. (Previously Presented) The system of claim 60 further comprising:  
an assigning module to assign the wait request to a connection between the web server and a business process server; and  
a listening module to listen to the connection for the asynchronous message, wherein  
the computer readable storage medium is configured to store the assigning module and listening module.
64. (Previously Presented) The system of claim 58 wherein the pushing means comprise:  
a calling module to call a callback function associated with the web browser when the asynchronous message is received, wherein the callback function pushes the asynchronous message, wherein  
the computer readable storage medium is configured to store the calling module.

65. (Previously Presented) The system of claim 64 further comprising:  
a reference storing module to store a reference to the callback function; and  
a reference using module to use the reference for calling the callback function,  
wherein  
the computer readable storage medium stores the reference storing module and  
the reference using module.
66. (Previously Presented) The system of claim 65 further comprising:  
a context storing module to store a second reference to context information, the  
context information identifying the web browser; and  
a context using module to use the second reference for providing the context  
information to the callback function, wherein  
the computer readable storage medium stores the context storing module and the  
context using module.
67. (Previously Presented) The system of claim 58 further comprising:  
a user interface changing module configured to perform at least one of a group  
consisting of the following:  
cause a first user interface object to move to visually capture a user's  
attention;  
cause a second user interface object to issue a sound to capture the user's  
attention;  
present a screen pop of data; and  
bring a web browser window to front of screen, wherein  
the computer readable storage medium is configured to store the user interface  
changing module.
68. (Previously Presented) The method of claim 1 further comprising:  
opening a persistent hypertext transfer protocol (HTTP) connection between the  
web browser and the web server when a user logs in; and

closing the persistent HTTP connection between the web browser and the web server in response to the web server pushing the asynchronous message to the web browser.